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THE FUNCTION OF SAVING.¹

Under the above title Mr. Bostedo has criticised, in the January number of the *ANNALS*,² some views which I expressed in my work, "The Positive Theory of Capital," in regard to the influence of saving on the formation of capital. While I advanced and illustrated by means of various examples the opinion, that an increase in the capital of a community can only take place in consequence of a balance of saving over spending on the part of its members, Mr. Bostedo arrives at an exactly opposite conclusion, namely, that "saving, as the term is commonly understood, has no influence whatever on the formation of capital."

My surest vindication would consist, I have no doubt, in asking the reader to study point by point, the detailed exposition of this subject in my "Positive Theory."³ The solution of a problem of this nature can only be presented by creating in the reader's imagination, in place of a superficial view of the surface money phenomena which present themselves to every-day observation, a complete and at the same time plastic picture of the actual relations of modern industrial society. Such a complete picture I have tried to sketch in my "Positive Theory," and I cannot, for obvious reasons, repeat the undertaking in these pages. I must rather content myself with commenting upon the particular points and difficulties which Mr. Bostedo raises in his criticism.

Mr. Bostedo accuses me, in substance, of having committed three errors: Of having made an ambiguous use of the word "saving," of having chosen an "unnatural" and therefore inadmissible illustration for the development of my doctrine, and of having fallen into a logical blunder in the course of this development.

¹ Translated from the German by the Editor.

² Vol. xvii, pp. 95-99.

³ Pp. 100-118 in the English version.

First, he maintains that I have characterized indifferently two quite distinct conceptions as "saving." Sometimes I have designated by this term the motives which determine the direction of production—and, in this sense my theory in regard to the influence of saving upon the formation of capital, though indeed correct, is of slight importance—sometimes, however, I have employed the term for an altogether different purpose, denoting thereby what everybody understands by "saving"—and in this usual sense my theory is false.

In reply I wish merely to insist that I have not confused two conceptions of "saving" in my writings, but that I have merely endeavored to analyze completely one conception and to present to the reader an all-around picture of the "saving" process. To put the matter more concretely, that which "everybody understands as saving" has first of all its negative side, that is, the not-consuming of a portion of income, or, in terms applicable to our money-using society, the not-spending of a portion of the money annually received. This negative aspect of saving is the one which is made most prominent in every-day speech, and is often the only one considered, since comparatively few people follow the sums of money saved further than to the receiving window of a bank or trust company. But here the positive part of the saving process only just begins, to complete itself quite out of the range of vision of the person who saves, whose action has nevertheless given the impulse to the whole movement: the bank collects the savings of its depositors and places them at the disposal of the business community in one form or another—through advances on mortgages, loans to railroads and other corporations in exchange for their bonds, accommodations to business managers, etc.—for use in the furtherance of productive enterprises, which but for such aid either could not be prosecuted at all or not with the same efficiency. If those who save had refrained from so doing and instead had lived more luxuriously, that is, bought and

consumed more or finer foods, wines, clothing and other pleasure-affording goods, they would, through their increased demand for these commodities, have stimulated their production; conversely, as a result of their saving portions of their incomes and depositing them in banks, they give an impulse to production in the direction of increasing the output of productive appliances, of railroads, factories, machines, etc. Whether I am accurate in this analysis of the effect of saving will appear in connection with my discussion of the third of the above criticisms. At this point I wish merely to insist that my theory does not involve two different conceptions of saving, but that the saving which acts as impulse or motive in giving direction to production is exactly the same "saving as it is commonly understood." I simply direct attention to the other side of the process, to the positive consequences of the negative first step, which is the not-consuming.

Turning to the second point, Mr. Bostedo declares, that the illustration by means of which I try to make clear the influence of saving on the formation of capital, "supposes a very unnatural case." I had, merely by way of illustration, assumed that "each individual in the community consumes, on the average, only three-quarters of his income and saves the rest." If Mr. Bostedo means by his criticism that it is quite improbable that in any large community every individual, without a single exception, should save from his income at the same time and in the same proportion, he is undoubtedly right. But, as a matter of fact, as my introductory phrase, "on the average," indicates, I do not lay the slightest weight upon the details of my illustration, and even if I did, the mere *improbability* of the case assumed would not in the least invalidate it as an aid in the exposition of a general principle. Indeed, I would like, here, to venture the paradoxical assertion that good illustrations which are to serve in the elucidation of complex phenomena, must always involve a large measure of improba-

bility. This is because good examples must always be simple, comprehensive and striking, and must accordingly depart widely from the confused and undifferentiated facts of real life. I believe that Hume's classic example, that every person in the country on rising in the morning finds a gold piece in his pocket, will be admitted to be more improbable than the one I employed, and that Mr. Bostedo's own assumption, with which his criticism concludes, "that all the members of the community produced all their lives and all their lives lived up to their incomes," is, from the point of view of actual conditions, certainly no more probable than mine.

But—and this brings us to the third criticism, which touches at once the most important and most interesting point in the controversy—my illustration is characterized as not merely "unnatural" but even as "impossible," and the explanation built upon it is described as both "confused and contradictory."

The "impossibility" of my assumption, Mr. Bostedo undertakes to prove by means of the following syllogism: When all of the members of a community simultaneously save one-quarter of their incomes, they thereby reduce by one-quarter their demand for consumption goods. The lessened demand compels producers to curtail production correspondingly. But if production shrinks along with consumption, then obviously there can be no outlet for savings; the realization of the assumed saving of one-quarter of the community's income is thus shown to be impossible.

I suspect that this syllogism will arouse in the minds of most readers the suspicion that altogether too much has been proved. For if it were true, then not only would the simultaneous saving of one-fourth of the community's income be impossible, but all real saving would be impossible. If every attempt to curtail consumption must actually result in an immediate and proportionate curtailment of production, then indeed no addition to the accumulated wealth of society

could ever result from saving. Particular individuals might save portions of their incomes, but only on condition that other individuals in the same community consumed in excess of theirs; as a whole society could never lay aside portions of its social income, and the accumulations which certain nations like the French or Dutch have made in consequence of their greater average thrift in comparison with such peoples as the Spaniards or the Turks, must, however universal such phenomena may appear, be described as sheer illusion. I believe that Mr. Bostedo is really disposed to cling to this opinion with all its consequences; at any rate, his concluding statements seem to me to harmonize with this view, for he says with special emphasis that every saving is only a transfer of purchasing power from the savers *to other members* of the community. I am even more confident, however, that most readers will refuse to accept this analysis as one corresponding with their experience, and will conclude rather that there is something wrong with a chain of reasoning which leads to such an improbable conclusion.

The fault in the reasoning is indeed not far to seek. It is that one of the premises, the one which asserts that a curtailment of "consumption for immediate enjoyment" must involve also a curtailment of production, is erroneous. The truth is that a curtailment of consumption involves, not a curtailment of production generally, but only, through the action of the law of supply and demand, a curtailment in certain branches. If in consequence of saving, a smaller quantity of costly food, wine and lace is bought and consumed, less of these things will *subsequently*—and I wish to emphasize this word—be produced. There will not, however, be a smaller production of goods generally, because the lessened output of goods ready for immediate consumption may and will be offset by an increased production of "intermediate" or capital goods.

This last proposition is just what Mr. Bostedo refuses in
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express terms to admit. In defending his position he adds to his first syllogism a second designed especially to prove that this assumption of mine is incorrect and, moreover, that it is inconsistent with the premises upon which my own theory rests.

His argument is essentially as follows: Production is universally called forth and guided by demand. This is true, even of the production of capital, since capital consists, according to my own theory as quoted by Mr. Bostedo, simply of unfinished goods. These are demanded, it goes without saying, only when and in so far as the finished or consumption goods expected to be made from them are demanded. It follows that, at last analysis, the production of capital goods is also called forth and guided only by demand for consumption goods. If, now, in consequence of universal saving, the demand for consumption goods is reduced by one-quarter, then it is not apparent how it can be possible for more capital goods than formerly to be demanded and produced. For who would have any inducement to producing an additional quantity of unfinished goods when the demand for finished goods, instead of becoming greater, has actually become less? What kinds of products are to be made from the increased supply of unfinished goods? Who is to buy them?

This reasoning of my honored critic is certainly presented with great dialectical skill. It has, however, one weak point. There is lacking from one of his premises a single but very important word. Mr. Bostedo assumes and represents me as assuming in my illustration, that saving signifies necessarily a curtailment in the demand for consumption goods. "He had assumed," he says, referring to me, "that all the people have curtailed their demand for consumption goods one-fourth." Here he has omitted the little word "present." The man who saves curtails his demand for *present* consumption goods but by no means his desire for pleasure-affording goods generally. This is a proposition which,

under a slightly different title, has already been repeatedly and, I believe, conclusively discussed in our science both by the older writers and in contemporary literature. Economists are to-day completely agreed, I think, that the "abstinence" connected with saving is no true abstinence, that is, no final renunciation of pleasure-affording goods, but, as Professor Macvane happily described it, a mere "waiting." The person who saves is not willing to hand over his savings without return, but requires that they be given back at some future time, usually indeed with interest, either to himself or to his heirs. Through saving not a single particle of the demand for goods is extinguished outright, but, as J. B. Say showed in a masterly way more than one hundred years ago in his famous theory of the "vent or demand for products" (*des débouchées*),¹ the demand for goods, the wish for means of enjoyment is, under whatever circumstances men are found, insatiable. A person may have enough or even too much of a particular kind of goods at a particular time, but not of goods in general nor for all time. This doctrine applies particularly to saving. For the principal motive of those who save is precisely to provide for their own futures or for the futures of their heirs. This means nothing else than that they wish to secure and make certain their command over the means to the satisfaction of their future needs, that is over consumption goods at a future time. In other words, those who save curtail their demand for consumption goods in the present merely to increase proportionately their demand for consumption goods in the future.

But if this is true—and I believe that Mr. Bostedo himself has no other conception of the nature of saving since he also, towards the end of his communication, recognizes that those who save expect a future return either to themselves or to their heirs, that they therefore do not "renounce" but merely "wait"—then the occasion for a curtailment of production—as Mr. Bostedo describes the matter—is absent,

¹ " *Traité d'économie politique*," Bk. I, chap. xv.

since the demand for goods generally has not become smaller. There is, however, it is true, occasion for a change in the direction of production as I should describe it ; for if fewer consumption goods are demanded at the moment and more in the future, and production is not to outrun the demand—as both of us assume—the productive powers must be so disposed that fewer consumption goods will be produced at the moment and proportionally more will come to maturity in the future. The principal way to effect this result is to invest the productive forces, land and labor, in more extended or round-about processes of production, or to produce in larger quantity than before “intermediate products,” from which, at a later period, goods ready for consumption may issue—in other words to increase the production of capital goods.

When Crusoe on his island saves up a store of provisions in order to gain time for the fashioning of better weapons, with which he hopes later to secure a much larger quantity of provisions, these relations are all clearly discernible. It is obvious that Crusoe's saving is no renunciation, but simply a waiting, not a decision not to consume at all, but simply a decision not to consume yet; that furthermore there is no lack of stimulus to the production of capital goods nor of demand for the consumption goods subsequently to be produced by their aid.

In a complex industrial society with a highly differentiated division of labor the relations are the same, though they are not quite so easy to understand. One difficulty in the latter case is connected with the fact that the varieties of consumption goods to be demanded and the periods of time when they will be demanded, either by the person who saves or by his heirs, is not usually predetermined. The person who saves has in his hand, as it were,—and I think Mr. Bostedo's opinion coincides closely with this view—an order calling for future means of enjoyment in general, which he may have filled exactly as he pleases in this or that kind of

consumption goods, dwelling houses, clothes, equipages, wines, etc., and which he may present for partial or complete satisfaction whenever he pleases, or even cause to be renewed again. From this circumstance results, it is not to be denied, a certain complexity from the point of view of production. But Mr. Bostedo appears to me not only to exaggerate the degree of this complexity, but to altogether misunderstand its real nature. While it is usually not possible to designate in advance the kinds of consumption goods towards which the demand of those who save will be directed, Mr. Bostedo assumes without more ado that such a demand, which is to serve as a stimulus and motive to further production, will be altogether absent. Such an assumption is just as indefensible as would be the assumption of a banker, who has received deposits and issued in exchange therefor certificates payable on demand in whatever form of currency the depositor may prefer, that he has no deposit liabilities whatever, and therefore is under no necessity of making provision to redeem these certificates of deposit by setting aside a reserve of means of payment. To be sure it is uncertain in just what form of currency or at just what time the deposit will be demanded, but that *it will be* demanded is certain. In exactly the same way it is certain that those who save will not merely not forego their claim to goods in the future, but that sometime they will assert it as regards both capital and interest, and that they will then draw out such goods as they choose in such quantity as they choose, up to the limit fixed by the amount of their claim, and that production may and must take into account this future demand.

But how can production take account of a demand whose direction is not yet known? This difficulty appears at first thought to be very great, but as a matter of fact it is not at all serious and in any event it is no different and no greater than analogous difficulties with which every system of production depending upon the division of labor must reckon

quite aside from the phenomenon of saving. The difficulty is not very serious because, in accordance with the law of large numbers, particular idiosyncracies and whims to a certain extent offset and compensate each other. The case of depositors in a bank serves here again as a good illustration. Each separate depositor may draw out the whole or a part of his deposit, whenever he chooses, but if the banker has a large number of depositors experience teaches that all of them will never want their deposits at once, but that the withdrawals will obey, more or less perfectly, a regular rule, and, in consequence of this fact, as is well known, bankers need to keep as a reserve in ready money only a small proportion of their demand liabilities and may invest the remainder in their business. It is exactly the same way in the case of saving. Here, too, production may count on having only a certain proportion of the claims to capital and interest presented as demands for consumption goods in each productive period and on having the remainder prolonged as titles to ownership over intermediate products or capital goods. Production, consciously or unconsciously adjusts itself to the situation, when, as must be the case in every capitalistically organized community, matters are so ordered that in each period a certain quantity of goods ready for consumption is turned out, while a greater stock of goods in the form of capital remains over for the service of future periods.

But, one may ask, to what kinds of consumption goods shall production be directed when it is not known in what kinds of goods those who save may decide to have their claims discharged? The answer is very simple: those directing production know this no better, but also no worse of the special demand of those who save than they know it of the demand of consumers generally. A highly complex, capitalistic and sub-divided system of production does not wait usually for wants to assert themselves before providing for them, it has to anticipate them some time in advance.

Its knowledge of the amount, the time and the direction of the demand for consumption goods does not rest on positive information, but can only be acquired by a process of testing, guessing or experimenting. Production may indeed make serious mistakes in this connection and when it does so it atones for them through the familiar agency of crises. Usually, however, it feels its way, drawing inferences for the future from the experience of the past, without serious mishap, although sometimes little mistakes are with difficulty corrected by a hasty rearrangement of the misapplied productive forces. Such readjustments are materially facilitated, as I was at pains to show at length in my "Positive Theory," by the great mobility of many intermediate products.

Moreover, the law of large numbers acts here again as a balancing and compensating agency. It is, indeed, highly improbable that all of those who save will liquidate their counter claims in exactly the same kinds of consumption goods. It is much more probable that their claims to pleasure-affording goods will divide themselves between the different branches of production in the same proportion that has already determined the direction of previous productive processes, or at any rate that they will not depart suddenly and violently from the standard so set. The compensating effect of the law of large numbers is further re-enforced by the fact that the demand for consumption goods arising from the counter claims of those who have saved constitutes no isolated influence but is fused with the other demands for consumption goods of all the other classes in industrial society into one great composite demand.

Finally, one further consideration, whose influence Mr. Bostedo appears to me to have ignored without the least justification, must not be overlooked. This is the increased efficiency which production acquires in consequence of the prolongation of the period of production made possible through saving. With or without an increasing demand on the part of the public, every individual producer is striving

to improve his methods of production, since in this way he may get ahead of his competitors and secure for himself a larger share of the market. If, now, the opportunity is presented to business managers through the offer of the savings of others, to improve their productive appliances, no one need feel any anxiety that they will not be glad to embrace such a chance and that the "inducement to a greater investment of capital," which Mr. Bostedo fails to discover, will not be present. And if the technical improvement once works out its effects in the shape of more efficient production and cheaper products, no one need again be concerned lest the cheapening shall fail to call forth new strata of demand, nor lest the all around increase in the supply of products shall fail to lead on the other hand to a proportionate increase in sales in the sense of Say's famous theory of "vent or demand for products."

It is thus, in my opinion, that the phenomena connected with saving are interrelated. The matter presents itself to me otherwise than to Mr. Bostedo, but not, I hope, because my view is less comprehensive or more superficial.

Mr. Bostedo appears to me to leave a serious gap in his explanation of the formation of capital, when he decides to disregard entirely the part which saving plays in the process and to rely exclusively upon the ability of capital goods to come into existence of themselves so soon as the demand for consumption goods directs itself towards those in whose production the capital goods required play a useful rôle. For he overlooks here the fact that all kinds of pleasures and pleasure-affording goods may be created in a great variety of different ways; grain, the most universal necessity of life, may be produced either by so-called "extensive" culture in short periods with little capital, or by so-called "intensive," long-period culture with correspondingly more capital; and one may travel either on a mule's back, in a sedan chair, by carriage, by automobile or by railway. When a nation acquires a taste for travel, it cannot unfortunately place the

slightest reliance on the ability of lines of railway to spring up spontaneously out of the ground, but if it wishes to construct them with its own resources, it must have previously saved the needed sums out of its income, and if this has not been done, it must call in the aid of the savings of other nations ; but for the savings of the English and the French, Egypt would not to the end of time have built the Suez Canal.

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